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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/689,460 | 10/12/2000 | Richard Alan Dayan | RPS920000066 | 7968 |

25299 7590 06/07/2004

IBM CORPORATION
PO BOX 12195
DEPT 9CCA, BLDG 002
RESEARCH TRIANGLE PARK, NC 27709

EXAMINER

HENEGHAN, MATTHEW E

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2134

DATE MAILED: 06/07/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

129

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 09/689,460 | Applicant(s) DAYAN ET AL. | |
| | Examiner Matthew Heneghan | Art Unit 2134 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-30 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-30 have been examined.

Claim Objections

2. Claim 7 is objected to because of the following informality: It has two steps numbered "c1a." For purposes of the prior art search, it is being presumed that claim 7 is dependent upon claim 5. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1, 2, 4, 5, 7, 16, 17, 19, 20, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,463,537 to Tello.

As per claims 1, 2, 16, and 17, the security system disclosed by Tello includes a security engine wherein it is determined if the security feature (a smart card) is installed (see column 7, lines 58-62) at the beginning of the boot-up cycle. The encryption algorithms are written in flash memory, which is nonvolatile (see column 7, line 63 to column 8, line 9). This includes a public key algorithm, RSA, which has both a public and a private key (see column 8, lines 34-40).

As per claims 4, 5, 19, and 20, this is being done at the beginning of the POST sequence (see column 23, lines 36-38).

As per claims 7 and 22, a check is made to see if a security card had previously been installed (see column 23, lines 43-52).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 6, 8-14, 18, 21, and 23-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,463,537 to Tello as applied to claims 2, 5, and above, and further in view of U.S. Patent No. 4,593,384 to Kleijne.

Regarding claims 3, 6, 10, 18, 21, and 25, Tello discusses the use of anti-tampering mechanisms (see columns 1-3), but does not incorporate such a mechanism into the system.

Kleijne discloses an anti-tamper mechanism that protects key storage (KSK) (see column 9, lines 7-17) and checks the computer's temperature and voltage for tampering (see column 9, lines 51-63), and clears key memory if events make it no longer valid. Though the memory clearing as disclosed is in response to a tamper event, the removal of a key card would also constitute a reason to clear the memory containing the keys (the KSK), rendering stored data useless (though the computer is still operative), since it would compromise the robustness of the security nomenclature. This is done to prevent any external access to the key data stored in memory (see column 9, lines 3-17). If no tampering has taken place, the system subsequently boots normally.

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Tello by adding the anti-tamper mechanism disclosed by Kleijne, to prevent any external access to the key data stored in memory.

Regarding claims 8 and 23, Tello prompts the user if no card is present (see column 23, lines 50-52).

As per claims 9 and 24, Tello deploys new keys and continues booting after a new security card is inserted (see column 23, line 53 to column 24, line 15).

Regarding claims 10 and 25, the computer does boot if there has been no tamper event.

Regarding claims 11, 12, 26, and 27, the outcome of subsequent boots in Tello depends on whether a card has been initialized during a previous boot sequence. Since the removal of a card would constitute a breach of the integrity of the housing, it can be construed as a "tamper event."

Regarding claims 13, 14, 28, and 29, key information is compared during bootup. It can be any type of key, including a public key (see column 7, line 63 to column 8, line 40).

Regarding claim 30, the computer has the means to change information on the security card as it sees fit (see column 25, lines 9-26).

Allowable Subject Matter

5. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: It would be impossible to modify the invention of Tello such that card information could be simultaneously deleted both from the card and the computer, since a working

card must always be in the system to keep it running. No other art could be found that would render this claim unpatentable, in view of the limitations of the base claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,892,906 to Chou et al. discloses a system for validating one of two keys supplied to the computer before booting up.

U.S. Patent No. 5,949,882 to Angelo discloses a computer boot-up based on a password using encryption.

U.S. Patent No. 6,557,104 to Vu discloses a system for only allowing boot-up if a valid token exists.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E. Heneghan, whose telephone number is (703) 305-7727. The examiner can normally be reached on Monday-Thursday from 8:00 AM - 4:00 PM Eastern Time. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse, can be reached on (703) 308-4789.

Any response to this action should be mailed to:
Commissioner of Patents and Trademarks

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Or faxed to:

(703) 872-9306

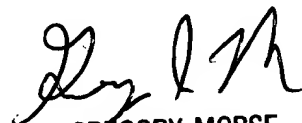
Hand-delivered responses should be brought to Crystal Park 2, 2121 Crystal Drive, Arlington, VA 22202, Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

MEH



June 1, 2004



GREGORY MORSE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100